CIPAC MT STATUS REPORT

29.08.2023

MT 202 Discharge Rate of Aerosol Dispensers

Allocated to DAPF

CIPAC methods published in:

Not published

CIPAC 62nd meeting, June 2018 in Panama City

Discharge Rate of Aerosol Dispensers including clogging by Mr Oliver Gutsche (5153)
Mr Gutsche presented on behalf of DAPF the results of a validation study for the discharge rate (DR) of aerosol dispensers (AE). The purpose of the developed method was to evaluate whether aerosol dispensers are fit for use. Based on preliminary experiments a draft method was proposed. After preparation of the sprayer (shaking for 10 s, followed opening the valve for 5 s) the bottle is weighed, shaken for 10 s, sprayed for 10 s, and weighed again. Repeat this procedure until the bottle is empty. Calculate the DR per 10 s, the fill level and the residue. The FAO manual (8.11, note 9) describes that the temperature of the bottle should be controlled for good repeatability.
However experiments with two different types of AE have proven that temperature equilibration is not required.
Six participants received two AEs. All participants performed the test according to the draft procedure. Overall 84 results were obtained for the AE based on a propane/butane propellant and 140 results were obtained for a compressed air bag based AE. Average deviations of the mean DR were equal or less than 10% proving that the method was fit for purpose and a draft MT was proposed.
Mrs Nováková mentioned that her colleague remarked that the calculation is quite complicated and proposed an alternative calculation method for consideration.

Closed meeting:
Mr Hänel remarked that the trial was only validated by DAPF and therefore was not compliant to CIPAC guidelines. Mr Garvey replied that the remark of Mr Hänel was correct but that the method will only be applied within “DAPF-territory”. Mr Hänel will contact DAPF for clarification about their intentions.
Mr Hänel clarified with the head of DAPF that the intention of DAPF was not to get provisional status. Consequently, the decision was that CIPAC full trials are recommended.

CIPAC 66th meeting, June 2022 Virtual

Discharge rate of aerosol dispensers by Ms Claudia Vinke (5153, 5320)

Ms Vinke presented the results of a full scale collaborative trial for the determination of the discharge rate of two types of aerosol dispensers with 10 participants. One dispenser was contained compressed air and an inner bag whereas the other dispenser was an aerosol can with a propane/butane/isobutane mixture as propellant. The discharge rate of the aerosol dispenser was determined by measuring the quantity of the material expelled through the valve for 10 s until empty. The resulting discharge rate diminished from 1.98-1.25% until approximately 11% material was remaining and was consistent with all participants when applying the method to the compressed air dispenser. When applying the method to the aerosol can two distinct sets of data were obtained based on whether the laboratory used the option of adding an additional spray tube to the nozzle. The discharge rates in those were lower due to the back pressure caused by the narrow tubing. However, the results were in line with each other until approximately 6% of the material was left in the can. For the laboratories not using the additional tubing the results were in in line with each other until approximately 20% material remained.

Ms Vinke recommended this method to be accepted as a provisional CIPAC method.

The following comments were received from the meeting:

- Mr Hänel asked whether the use of the tubing was required on the label. It was free of choice and therefore also not requested from the participating laboratories.

Closed meeting:

Mr Hänel requested whether the use of tubing has to be specified as it is not requested on the label. And more in general Ms Tessier asked how CIPAC should deal with clear differences in packaging types as they result in different application rates. Mr Pigeon remarked that both tested packaging types were functional on which Ms Tessier replied that pesticides are within CIPAC territory but the packaging types are not. Mr Hänel proposed to promoted the method to a provisional CIPAC method but that a clarification from DAPF would be necessary. This was accepted by the meeting.
The method can be promoted to a **provisional CIPAC method** when an acceptable clarification from DAPF was received.

CIPAC 67th meeting, June 2023 Braunschweig

Decision:
At the previous meeting, the method was accepted as provisional. No further comments were received. The method can be promoted to a **full** CIPAC method.